**Ecology Project and Activities.**

You need to complete at least 1 activity from each column of the table, and you need to ensure you reach a total of at least 50 marks. Circle the activities you complete and attach this page to your finished work.

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| Knowledge  (5 marks) | Communicate  (6 marks) | Research  (6 marks) | Design/Create  (7 marks) | Challenge  (10 marks) |
| Threats to Biodiversity worksheet  Questions 1-5 | Design a poster, podcast or Photo Story to teach people about bushfires, including emergency survival information and how to prepare for bushfire season. | Conduct research to find out how nutrient cycling fits into ecosystems. Why is nutrient cycling essential for ecosystem health? List the main biogeochemical (nutrient) cycles. | Design your own plant or animal that is able to survive fire. Label your diagram to show what structures it has developed to help it survive. | Which do you think would be more resistant to change: big complicated ecosystems with numerous species interacting or simple ecosystems with relatively few species interacting. Explain with examples. |
| Components of an Ecosystem worksheet | Imagine you are a newspaper reporter. Write a story to explain the enhanced greenhouse effect to people. Include a description of the causes of global warming and some of the effects it may have. | How does climate change/human interaction/habitat change affect an ecosystem? Suggest ways of solving this problem. | Create your own study to explore the different environments in the City of Knox. | Find out how much A4 copy paper the school uses each year. What is the content of this paper? Does it have any recycled content? What does this mean? If one tree produces about 8000 sheets (about 16 reams), then how many trees would be needed to supply the school with paper? How can the school use paper more sustainably? |
| Australia’s arid ecosystems worksheet | Many people in Australia find English cottage gardens pretty and plant only English species. Discuss how this might have an impact on local ecosystems and biodiversity. | Find out more about the introduction of a species to Australia, including the impact it has had. Include a map to show where it came from and how it got to here. | Construct a model of an ecosystem. Include labels and explanations. | Explain how human changes to habitats can lead to endangered species or extinctions, including the effects of the introduction or removal of a species. |
| Nature’s Time Machine  Textbook pages 100-101  Questions 1-10 | Create a poster that illustrates why it is important to protect ecosystems. | Analysing Greenhouse Gases worksheet. Create an Excel spreadsheet with the data and graph your data. | Use ‘Inspiration’ to create your own Carbon Cycle. Include labels and explanations. | Work as a team to design an Australian garden for the school. Include reasoning for choosing the plants you have and information about each plant. |